

Application No. 10/807,079

Amendments to the Claims:

This listing of claims will replace all previous versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A polishing pad substrate for use in chemical-mechanical polishing comprising a copolymer, wherein the copolymer has at least one hydrophilic repeat unit and at least one hydrophobic repeat unit, and wherein the polishing pad substrate has a surface energy of about 34 mN/m or less.
2. (canceled)
3. (original) The polishing pad substrate of claim 1, wherein the hydrophilic repeat unit is selected from the group consisting of esters, ethers, acrylic acids, acrylamides, amides, imides, vinylalcohols, vinylacetates, acrylates, methacrylates, sulfones, urethanes, vinylchlorides, etheretherketones, carbonates, and oligomers and combinations thereof.
4. (original) The polishing pad substrate of claim 1, wherein the hydrophilic repeat unit is urethane.
5. (original) The polishing pad substrate of claim substrate 1, wherein the hydrophobic repeat unit is selected from the group consisting of fluorocarbons, tetrafluoroethylenes, vinylfluorides, siloxanes, dimethylsiloxanes, butadiene, ethylene, olefins, styrene, propylene, and oligomers and combinations thereof.
6. (original) The polishing pad substrate of claim 1, wherein the hydrophobic repeat unit is fluorocarbon or siloxane.

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7. (original) The polishing pad substrate of claim 1, wherein the polishing pad substrate is a solid, non-porous polishing pad substrate.

8. (original) The polishing pad substrate of claim 1, wherein the polishing pad substrate has a density of about 90% or more of the maximum theoretical density of the copolymer.

9. (original) The polishing pad substrate of claim 1, wherein the polishing pad substrate is a porous polishing pad substrate.

10. (original) The polishing pad substrate of claim 9, wherein the polishing pad substrate has a density of about 70% or less of the maximum theoretical density of the copolymer.

11. (original) The polishing pad substrate of claim 9, wherein the polishing pad substrate has a void volume of about 75% or less.

12. (original) The polishing pad substrate of claim 1, wherein the polishing pad substrate is a polishing layer.

13. (original) The polishing pad substrate of claim 12, wherein the polishing layer further comprises grooves.

14. (original) The polishing pad substrate of claim 1, wherein the polishing pad substrate is a subpad.

15. (original) The polishing pad substrate of claim 1, wherein the polishing pad substrate further comprises an optically transmissive region.

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16. (original)The polishing pad substrate of claim 15, wherein the optically transmissive region has a light transmission of at least 10% at one or more wavelengths between from about 190 nm to about 3500 nm.

17. (original)The polishing pad substrate of claim 15, wherein the optically transmissive region comprises the copolymer.

18. (original)The polishing pad substrate of claim 1, wherein the polishing pad substrate further comprises abrasive particles.

19. (original)The polishing pad substrate of claim 18, wherein the abrasive particles comprise metal oxide selected from the group consisting of alumina, silica, titania, ceria, zirconia, germania, magnesia, co-formed products thereof, and combinations thereof.

20. (withdrawn)The method of polishing a workpiece comprising  
(i) providing a workpiece to be polished,  
(ii) contacting the workpiece with a polishing system comprising the polishing pad substrate of claim 1, and  
(iii) abrading at least a portion of the surface of the workpiece with the polishing system to polish the workpiece.

21. (withdrawn)The method of claim 20, wherein the workpiece comprises a surface layer comprising a material selected from the group consisting of monocrystalline silicon, polycrystalline silicon, amorphous silicon, tungsten silicide, titanium silicide, organic polymer, tungsten, copper, titanium, metal oxide, metal nitride, and combinations thereof.

22. (withdrawn)The method of claim 20, wherein the polishing system is a chemical-mechanical polishing system further comprising a polishing composition.

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23. (withdrawn) The method of claim 20, wherein the method further comprises detecting *in situ* a polishing endpoint.

24. (currently amended) A polishing pad substrate for use in chemical-mechanical polishing comprising a polymer, wherein the polymer has at least one hydrophilic unit and at least one hydrophobic unit attached to the polymer chain, and wherein the polishing pad substrate has a surface energy of about 34 mN/m or less.

25. (original) The polishing pad substrate of claim 24, wherein the polymer is a thermoplastic polymer or a thermoset polymer.

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